

CLAIMS

What is claimed is:

1 1. A platform assembly that supports a vibration-
2 sensitive payload, comprising:

3 a table that has a first surface coupled to the
4 vibration-sensitive payload, a second surface, and an inner
5 core located between said first and second surfaces; and,
6 a vibration sensor located within said inner core.

1 2. The assembly of claim 1, wherein said first
2 surface extends along a first plate and said vibration
3 sensor is attached to said first plate.

1 3. The assembly of claim 1, further comprising an
2 electrical connector attached to an external surface of
3 said table and coupled to said vibration sensor.

1 4. The assembly of claim 1, further comprising a
2 damper located within said inner core.

1 5. The assembly of claim 4, wherein said damper
2 includes an active actuator that is coupled to said
3 vibration sensor.

1 6. The assembly of claim 5, further comprising a
2 control circuit coupled to said vibration sensor and said
3 active actuator.

1 7. The assembly of claim 1, further comprising a
2 monitor coupled to said vibration sensor.

1 8. The assembly of claim 1, further comprising a
2 honeycomb core within said inner core.

1 9. The assembly of claim 6, wherein said control
2 circuit causes said active actuator to create an active
3 force that emulates an effect of a viscous damper in a
4 frequency domain encompassing a plurality of natural
5 frequencies of a flexural vibration of said first surface.

1 10. The assembly of claim 1, wherein said vibration
2 sensor includes a wireless transmitter.

1 11. A platform assembly that supports a vibration-
2 sensitive payload, comprising:

3 a table that has a first surface coupled to the
4 vibration-sensitive payload, a second surface and an inner
5 core located between said first and second surfaces; and,

6 vibration sensor means for sensing a vibration of said
7 first surface.

1 12. The assembly of claim 11, wherein said first
2 surface extends along a first plate and said vibration
3 sensor means includes a vibration sensor attached to said
4 first plate.

1 13. The assembly of claim 11, further comprising an
2 electrical connector attached to an external surface of
3 said table and coupled to said vibration sensor means.

1 14. The assembly of claim 11, further comprising a
2 damper located within said inner core.

1 15. The assembly of claim 14, wherein said damper
2 includes an active actuator that is coupled said vibration
3 sensor means.

1 16. The assembly of claim 15, further comprising a
2 control circuit coupled to said vibration sensor and said
3 active actuator.

1 17. The assembly of claim 11, further comprising a
2 monitor coupled to said vibration sensor means.

1 18. The assembly of claim 11, further comprising a
2 honeycomb core within said inner core.

1 19. The assembly of claim 16, wherein said control
2 circuit causes said active actuator to create an active
3 force that emulates an effect of a viscous damper in a
4 frequency domain encompassing a plurality of natural
5 frequencies of a flexural vibration of said first surface.

1 20. The assembly of claim 11, wherein said vibration
2 sensor means includes a wireless transmitter.

1 21. A method for sensing a vibration of a vibration-
2 sensitive payload coupled to a first surface of a platform
3 table, comprising:

4 sensing the vibration with a vibration sensor location
5 within an inner core of a platform table.

1 22. The method of claim 21, further comprising
2 transmitting output signals from the vibration sensor to an
3 external monitor.

1 23. The method of claim 22, wherein the output
2 signals are transmitted through a cable and an electrical
3 connector attached to the platform table.

1 24. The method of claim 21, wherein the first surface
2 of the platform table is damped with an active actuator
3 located within the inner core.

1 25. The method of claim 24, wherein the active
2 actuator creates an active force that emulates an effect of
3 viscous damper in a frequency domain that encompasses a
4 plurality of natural frequencies of a flexural vibration of
5 the first surface of the platform table.